Ethiopia

Epidemiological Fact Sheet

on HIV/AIDS
and sexually
transmitted
infections

2000 Update

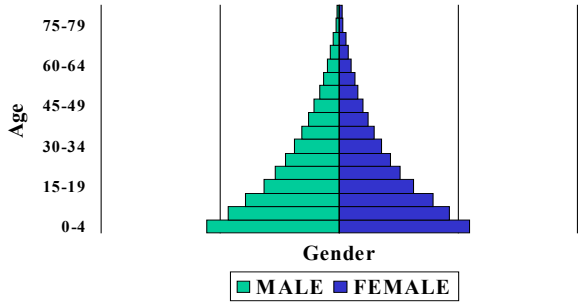
Joint United Nations Programme on HIV/AIDS
UNAIDS
UNICEF • UNDP • UNFPA • UNDCP
UNESCO • WHO • WORLD BANK

World Health
Organization

2 – Ethiopia

Country Information

Population pyramid, 1999



Indicators	Year	Estimate	Source
Total Population (thousands)	*1999*	61,095	UNPOP
Population Aged 15-49 (thousands)	*1999*	27,201	UNPOP
Annual Population Growth	*1990-1998*	2.7	UNPOP
% of Population Urbanized	*1998*	16	UNPOP
Average Annual Growth Rate of Urban Population	*1990-1998*	5.2	UNPOP
GNP Per Capita (US$)	*1997*	110	World Bank
GNP Per Capita Average Annual Growth Rate	*1996-1997*	3.0	World Bank
Human Development Index Rank (HDI)	*1999*	172	UNDP
% Population Economic Active			
Unemployment Rate			
Total Adult Literacy Rate	*1995*	36	UNESCO
Adult Male Literacy Rate	*1995*	46	UNESCO
Adult Female Literacy Rate	*1995*	25	UNESCO
Male Secondary School Enrollment Ratio	*1996*	13.0	UNESCO
Female Secondary School Enrollment Ratio	*1996*	10.3	UNESCO
Crude Birth Rate (births per 1,000 pop.)	*1999*	44	UNPOP
Crude Death Rate (deaths per 1,000 pop.)	*1999*	20	UNPOP
Maternal Mortality Rate (per 100,000 live births)	*1990*	1,400	WHO
Life Expectancy at Birth	*1998*	43	UNPOP
Total Fertility Rate	*1998*	6.3	UNPOP
Infant Mortality Rate (per 1,000 live births)	*1999*	113	UNICEF/UNPOP

UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance

Global Surveillance of HIV/AIDS and sexually transmitted infections (STIs) is a joint effort of WHO and UNAIDS. The UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance, initiated in November 1996, guides respective activities. The primary objective of the working group is to strengthen national, regional and global structures and networks for improved monitoring and surveillance of HIV/AIDS and STIs. For this purpose, the working group collaborates closely with national AIDS programmes and a number of national and international experts and institutions. The goal of this collaboration is to compile the best information available and to improve the quality of data needed for informed decision-making and planning at national, regional and global levels. The Epidemiological Fact Sheets are one of the products of this close and fruitful collaboration across the globe.

The working group and its partners have established a framework standardizing the collection of data deemed important for a thorough understanding of the current status and trends of the epidemic, as well as patterns of risk and vulnerability in the population. Within this framework, the Fact Sheets collate the most recent country-specific data on HIV/AIDS prevalence and incidence, together with information on behaviours (e.g casual sex and condom use) which can spur or stem the transmission of HIV.

Not unexpectedly, information on all of the agreed-upon indicators was not available for many countries in 1999. However, these updated Fact Sheets do contain a wealth of information which allows identification of strengths in currently existing programmes and comparisons between countries and regions. The Fact Sheets may also be instrumental in identifying potential partners when planning and implementing improved surveillance systems.

The fact sheets can be only as good as information made available to the UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance. Therefore, the working group would like to encourage all programme managers as well as national and international experts to communicate additional information to the working group whenever such information becomes available. The working group also welcomes any suggestions for additional indicators or information proven to be useful in national or international decision-making and planning.

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Estimated number of people living with HIV/AIDS

In 1999 and during the first quarter of 2000, UNAIDS and WHO worked closely with national governments and research institutions to recalculate current estimates on people living with HIV/AIDS. These calculations are based on the previously published estimates for 1997 and recent trends in HIV/AIDS surveillance in various populations. A methodology developed in collaboration with an international group of experts was used to calculate the new estimates on prevalence and incidence of HIV and AIDS deaths, as well as the number of children infected through mother-to-child transmission of HIV. Different approaches were used to estimate HIV prevalence in countries with low-level, concentrated or generalized epidemics. The current estimates do not claim to be an exact count of infections. Rather, they use a methodology that has thus far proved accurate in producing estimates that give a good indication of the magnitude of the epidemic in individual countries. However, these estimates are constantly being revised as countries improve their surveillance systems and collect more information.

Adults in this report are defined as women and men aged 15 to 49. This age range covers people in their most sexually active years. While the risk of HIV infection obviously continues beyond the age of 50, the vast majority of those who engage in substantial risk behaviours are likely to be infected by this age. The 15 to 49 age range was used as the denominator in calculating adult HIV prevalence.

❑ Estimated number of adults and children living with HIV/AIDS, end of 1999

These estimates include all people with HIV infection, whether or not they have developed symptoms of AIDS, alive at the end of 1999

Adults and children	**3000000**		
Adults (15-49)	**2900000**	**Adult rate (%)**	**10.63**
Women (15-49)	**1600000**		
Children (0-14)	**150000**		

❑ Estimated number of deaths due to AIDS

Estimated number of adults and children who died of AIDS during 1999:

Deaths in 1999	**280000**

❑ Estimated number of orphans

Estimated number of children who have lost their mother or both parents to AIDS (while they were under the age of 15) since the beginning of the epidemic:

Cumulative orphans	**1200000**

Estimated number of children who have lost their mother or both parents to AIDS and who were alive and under age 15 at the end of 1999:

Current living orphans	**903372**

Assessment of epidemiological situation – Ethiopia

HIV information among antenatal clinic attendees has been available from Ethiopia since 1989. In Addis Ababa, the major urban area, HIV prevalence increased among antenatal clinic attendees tested from 5 percent in 1989 to 20 percent in 1993. In 1997, 18 percent of antenatal clinic women tested in Addis were HIV positive. Outside of Addis Ababa, there is some limited information on HIV prevalence among antenatal clinic women. In 1991, a median of five percent of antenatal clinic attendees tested in Diredawa and Metu were HIV positive. In 1993, 4 percent of antenatal clinic attendees tested at 10 sites were HIV positive. In 1998, a median of 9 percent of antenatal clinic women tested were HIV positive.

Information on HIV prevalence among sex workers in Addis Ababa has been available since the mid-1980s. However, there is very little new information. In Addis Ababa, less than one percent of sex workers tested in 1985 were HIV positive. By 1990, HIV prevalence among sex workers tested in Addis Ababa had reached 54 percent. Outside of Addis Ababa, information on HIV prevalence among sex workers is available from 19 sites in 1988. HIV prevalence among sex workers tested in these sites ranged from 5 to 38 percent. In 1998, 17 percent of sex workers tested in 22 sites were HIV positive. HIV prevalence ranged from 1 percent in Masawa to 38 percent in Dessie.

There is some limited information available on HIV prevalence among STD clinic patients from Addis Ababa. HIV prevalence increased from 8 percent in 1987 to 38 percent in 1992. HIV prevalence among female STD clinic patients increased from 8 percent in 1987 to 37 percent in 1989. There is no recent information from this group. In 1985-86 about 0.1 percent of military recruits tested HIV positive. In 1991, 3 percent of military recruits tested were HIV positive.

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HIV sentinel surveillance

This section contains information about HIV prevalence in different populations. The data reported in the tables below are mainly based on the HIV data base maintained by the United States Bureau of the Census where data from different sources, including national reports, scientific publications and international conferences is compiled. To provide for a simple overview of the current situation and trends over time, summary data are given by population group, geographical area (Major Urban Areas versus Outside Major Urban Areas), and year of survey. Studies conducted in the same year are aggregated and the median prevalence rates (in percentages) are given for each of the categories. The maximum and minimum prevalence rates observed, as well as the total number of surveys/sentinel sites, are provided with the median, to give an overview of the diversity of HIV-prevalence results in a given population within the country. Data by sentinel site or specific study on which the medians were calculated are printed at the end of this fact sheet.

The differentiation between the two geographical areas Major Urban Areas and Outside Major Urban Areas is not based on strict criteria, such as the number of inhabitants. For most countries, Major Urban Areas were considered to be the capital city and – where applicable – other metropolitan areas with similar socio-economic patterns. The term Outside Major Urban Areas considers that most sentinel sites are not located in strictly rural areas, even if they are located in somewhat rural districts.

❑ **HIV prevalence in selected populations in percent** (for blood donors: 1/100 000)

Group	Area		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Pregnant women	Major Urban Areas	N-sites						2		1	1	1	1	2	4	4		
		Minimum						2.1		10.7	11.2	20.2	20.4	19.5	9.3	14.1		
		Median						5.05		10.7	11.2	20.2	20.4	19.9	18.7	17.6		
		Maximum						8		10.7	11.2	20.2	20.4	20.3	26.5	20		
Pregnant women	Outside Major Urban Areas	N-sites								2		10				1	5	
		Minimum								2.8		0				12.7	0.8	
		Median								4.85		4.3				12.7	9.2	
		Maximum								6.9		13				12.7	14.5	

Group	Area		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Sex workers	Major Urban Areas	N-sites		1	1	1	1	1	1									
		Minimum		0.6	2.7	2.7	19.4	24.7	54.2									
		Median		0.6	2.7	2.7	19.4	24.7	54.2									
		Maximum		0.6	2.7	2.7	19.4	24.7	54.2									
Sex workers	Outside Major Urban Areas	N-sites					19	6	4	2							22	
		Minimum					5.3	12.5	36.4	65.6							1.3	
		Median					17.7	31.2	50.25	67.5							17.0	
		Maximum					38.1	48.2	55	69.4							38.1	

Group	Area		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Injecting drug users	Major Urban Areas	N-sites																
		Minimum																
		Median																
		Maximum																
Injecting drug users	Outside Major Urban Areas	N-sites																
		Minimum																
		Median																
		Maximum																

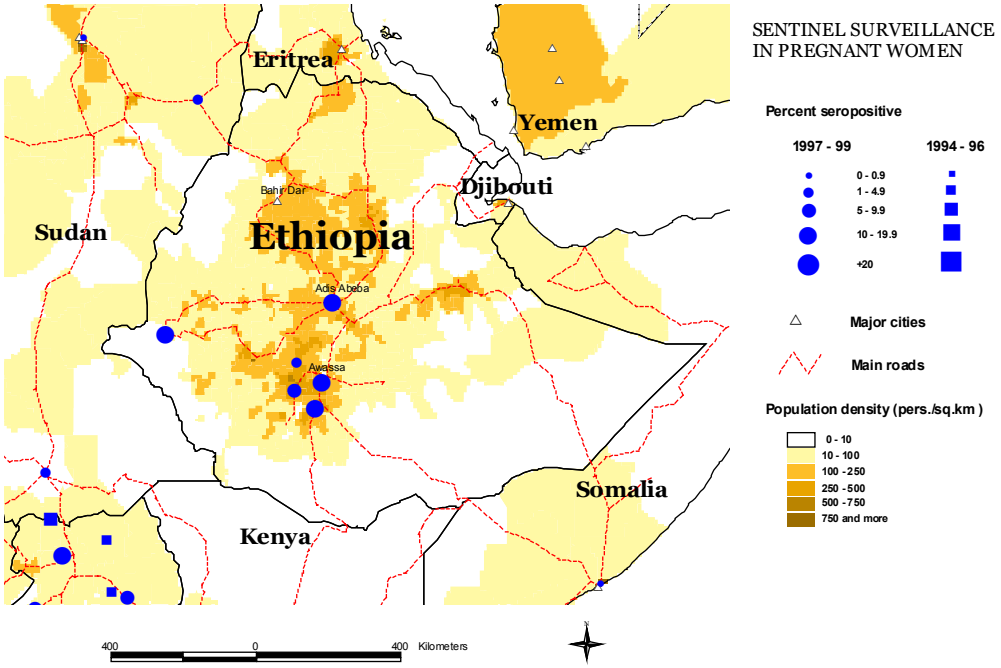
Group	Area		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
STI patients	Major Urban Areas	N-sites				2		2		1	2							
		Minimum				8		17.1		34	32							
		Median				8.15		26.95		34	37.5							
		Maximum				8.3		36.8		34	43							
STI patients	Outside Major Urban Areas	N-sites																
		Minimum																
		Median																
		Maximum																

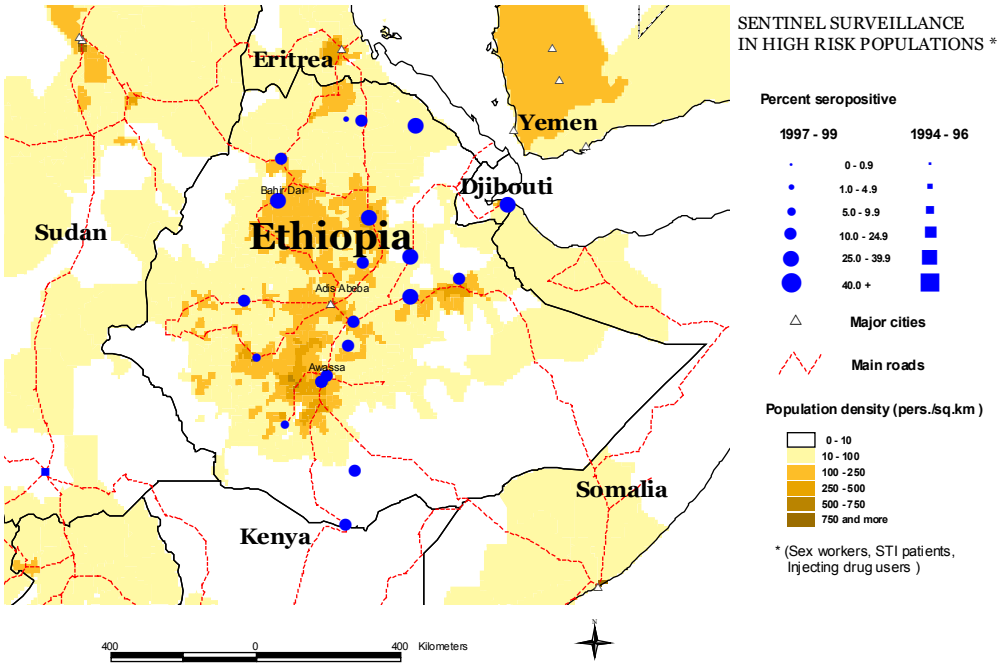
Group	Area		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Blood Donors	National	N-sites																
		Minimum																
		Median																
		Maximum																
Blood Donors	Major Urban Areas	N-sites																
		Minimum																
		Median																
		Maximum																

Group	Area		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Men having sex with men	Major Urban Areas	N-sites																
		Minimum																
		Median																
		Maximum																

Maps of HIV sentinel sites

Mapping the geographical distribution of HIV sentinel sites for different population groups may assist interpreting both the national coverage of the HIV surveillance system and explaining differences in levels and trends of prevalence. The UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance, in collaboration with the UNICEF/WHO HealthMap Programme, has produced maps showing the location and HIV prevalence of HIV sentinel sites in relation to population density, major urban areas and communication routes. Maps illustrate separately the most recent results from HIV sentinel surveillance in pregnant women and in sub-populations at higher risk of HIV infection.





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Reported AIDS cases

AIDS cases by year of reporting

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total	Unkn
0	0	0	0	0	0	0	2	17	85	190	448	897	3256	5132	6927	3793	832	7981	8314		37874	0

Date of last report:04/Jul/99

Following WHO and UNAIDS recommendations, AIDS case reporting is carried out in most countries. Data from individual AIDS cases is aggregated at the national level and sent to WHO. However, case reports come from surveillance systems of varying quality. Reporting rates vary substantially from country to country and low reporting rates are common in developing countries due to weaknesses in the health care and epidemiological systems. In addition, countries use different AIDS case definitions. A main disadvantage of AIDS case reporting is that it only provides information on transmission patterns and levels of infection approximately 5-10 years in the past, limiting its usefulness for monitoring recent HIV infections.

Despite these caveats, AIDS case reporting remains an important advocacy tool and is useful in estimating the burden of HIV-related morbidity as well as for short-term planning of health care services. AIDS case reports also provide information on the demographic and geographic characteristics of the affected population and on the relative importance of the various exposure risks. In some situations, AIDS reports can be used to estimate earlier HIV infection patterns using back-calculation. AIDS case reports and AIDS deaths have been dramatically reduced in industrialized countries with the introduction of HAART (Highly Active Anti-Retroviral Therapy).

Aids cases by age and sex

Sex	Age	<96	1996	1997	1998	1999	Unkn.	Total	%
All	All								
	0-4								
	5-9								
	10-14								
	15-19								
	20-24								
	25-29								
	30-34								
	35-39								
	40-44								
	45-49								
	50-54								
	55-59								
	60+								
	NS								
Male	All								
	0-4								
	5-9								
	10-14								
	15-19								
	20-24								
	25-29								
	30-34								
	35-39								
	40-44								
	45-49								
	50-54								
	55-59								
	60+								
	NS								
Female	All								
	0-4								
	5-9								
	10-14								
	15-19								
	20-24								
	25-29								
	30-34								
	35-39								
	40-44								
	45-49								
	50-54								
	55-59								
	60+								
	NS								
NS	All								
	0-4								
	5-9								
	10-14								
	15-19								
	20-24								
	25-29								
	30-34								
	35-39								
	40-44								
	45-49								
	50-54								
	55-59								
	60+								
	NS								

AIDS cases by mode of transmission

Hetero: Heterosexual contacts.
Homo/Bi: Homosexual contacts between men.
IDU: Injecting drug use. This transmission category also includes cases in which other high-risk behaviours were reported, in addition to injection of drugs.
Blood: Blood and blood products.
Perinatal: Vertical transmission during pregnancy, birth or breastfeeding.
NS: Not specified/unknown.

Sex	Trans. Group	<96	1996	1997	1998	1999	Unkn	Total	%
All	Total								
	Hetero								
	Homo/Bi								
	IDU								
	Blood								
	Perinatal								
	Other Known								
	Unknown								
Male	Total								
	Hetero								
	Homo/Bi								
	IDU								
	Blood								
	Perinatal								
	Other Known								
	Unknown								
Female	Total								
	Hetero								
	IDU								
	Blood								
	Perinatal								
	Other Known								
	Unknown								
NS	Total								
	Hetero								
	IDU								
	Blood								
	Perinatal								
	Other Known								
	Unknown								

Curable Sexually Transmitted Infections (STIs)

The predominant mode of transmission of both HIV and other STIs is sexual intercourse. Measures for preventing sexual transmission of HIV and STI are the same, as are the target audiences for interventions. In addition, strong evidence supports several biological mechanisms through which STI facilitate HIV transmission by increasing both HIV infectiousness and HIV susceptibility. Significant also is the observation of a sharp decline in the concentration of HIV in the genital secretions when the infection is treated. Monitoring trends in STI can provide valuable information on the sexual transmission of HIV as well as the impact of behavioural interventions, such as promotion of condom use.

Clinical services offering STI care are an important access point for people at high risk for both AIDS and STI, not only for diagnosis and treatment but also for information and education. Therefore, control and prevention of STI have been recognized as a major strategy in the prevention of HIV infection and ultimately AIDS. One of the cornerstones of STI control is adequate management of patients with symptomatic STIs. This includes diagnosis, treatment and individual health education and counselling on disease prevention and partner notification. Consequently, monitoring different components of STI control can also provide information on HIV prevention within a country.

❑ Estimated incidence and prevalence of curable STI's

	Incidence				Prevalence			
STI's	Year	Male	Female	All	Year	Male	Female	All
Chlamydia trach.								
Gonorrhoea								
Syphilis								
Trichomonas								

Comments:
Source:

❑ STI Incidence, men

Prevention Indicator 9: Proportion of men aged 15-49 years who reported episodes of urethritis in the last 12 months.

Year	Area	Age	Rate	N=
1994	Urban	15-49	4.6	

Comments:
Sources: M. Mehret et al. Baseline for the evaluation of an AIDS programme using prevention indicators: a case study in Ethiopia. Bulletin of the WHO. Sexual Risk Behaviour in Urban Populations of the Horn of Africa. Mohamed M. Ali, John G. Cleland, Michel Carael

❑ STI Prevalence, women

Prevention Indicator 8: Proportion of pregnant women aged 15-24 years attending antenatal clinics whose blood has been screened with positive serology for syphilis.

Year	Area	Age	Rate	N=
1994	Urban	15-24	8.8	2400

Comments:
Sources: M. Mehret et al. Baseline for the evaluation of an AIDS programme using prevention indicators: a case study in Ethiopia. Bulletin of the WHO. Sexual Risk Behaviour in Urban Populations of the Horn of Africa. Mohamed M. Ali, John G. Cleland, Michel Carael

❑ STI Case management (counselled)

Prevention Indicator 7: Proportion of people presenting with STD or for STD care in health facilities who received basic advice on condoms and on partner notification.

Year	Area	Age	Rate	N=
1994	Urban		19.0	

Comments:
Sources: M. Mehret et al. Baseline for the evaluation of an AIDS programme using prevention indicators: a case study in Ethiopia. Bulletin of the WHO. Sexual Risk Behaviour in Urban Populations of the Horn of Africa. Mohamed M. Ali, John G. Cleland, Michel Carael

❑ STI Case management (treatments)

Prevention Indicator 6: Proportion of people presenting with STD in health facilities assessed and treated in an appropriate way (according to national standards).

Year	Area	Age	Rate	N=
1994	Urban		4.0	

Comments:
Sources: M. Mehret et al. Baseline for the evaluation of an AIDS programme using prevention indicators: a case study in Ethiopia. Bulletin of the WHO. Sexual Risk Behaviour in Urban Populations of the Horn of Africa. Mohamed M. Ali, John G. Cleland, Michel CaraelSources:

8 – Ethiopia

Health service indicators

HIV prevention strategies depend on the twin efforts of care and support for those living with HIV or AIDS, and targeted prevention for all people at risk or vulnerable to the infection. These efforts may range from reaching out to vulnerable communities through large-scale educational campaigns or interpersonal communication; provision of treatment for STIs; distribution of condoms and needles; creating and enabling environment to reduce risky behaviour; providing access to voluntary testing and counselling; home or institutional care for persons with symptomatic HIV infection; and preventing perinatal transmission and transmission through infected needles or blood in health care settings. It is difficult to capture such a large range of activities with one or just a few indicators. However, a set of well-established health care indicators – such as the percentage of a population with access to health care services; the percentage of women covered by antenatal care; or the percentage of immunized children – may help to identify general strengths and weaknesses of health systems. Specific indicators, such as access to testing and blood screening for HIV, help to measure the capacity of health services to respond to HIV/AIDS – related issues.

❑ Access to health care

Indicators	Year	Estimate	Source
% of population with access to health services – total:			
% of population with access to health services – urban:			
% of population with access to health services – rural:			
Contraceptive prevalence rate (%):	1990-1999	4	UNICEF/UNPOP
% of births attended by trained health personnel:	1990-1999	8	UNICEF
% of 1-yr-old children fully immunized – DPT:	1995-1998	58	UNICEF
% of 1-yr-old children fully immunized – Polio:	1995-1998	57	UNICEF
% of 1-yr-old children fully immunized – Measles:	1995-1998	46	UNICEF
Proportion of blood donations tested:			
% of ANC clinics where HIV testing is available:			
HIV/AIDS Hospital Occupancy Rate (Days):			

Male and female condoms are the only technology available that can prevent sexual transmission of HIV and other STIs. Persons exposing themselves to the risk of sexual transmission of HIV should have consistent access to high quality condoms. AIDS Programmes implement activities to increase both availability of and access to condoms. The two condom availability indicators below are intended to highlight areas of strength and weakness at the beginning and end of the distribution system so that programmatic resources can be directed appropriately to problem areas.

❑ Condom availability (central level)

Prevention Indicator 2: Availability of condoms in the country over the last 12 months (central level).

Year	Area	N	Rate
1994	All	25000000	1.0

Comments:

Sources: M. Mehret et al. Baseline for the evaluation of an AIDS programme using prevention indicators: a case study in Ethiopia. Bulletin of the WHO. Sexual Risk Behaviour in Urban Populations of the Horn of Africa. Mohamed M. Ali, John G. Cleland, Michel Carael

❑ Condom availability (peripheral level)

Prevention Indicator 3: Proportion of people who can acquire a condom (peripheral level).

Year	Area	N	Rate
1994	All	306000	80.0

Comments:

Sources: M. Mehret et al. Baseline for the evaluation of an AIDS programme using prevention indicators: a case study in Ethiopia. Bulletin of the WHO. Sexual Risk Behaviour in Urban Populations of the Horn of Africa. Mohamed M. Ali, John G. Cleland, Michel Carael

Knowledge and behaviour

In most countries the HIV epidemic is driven by behaviours (e.g.: multiple sexual partners, intravenous drug use) that expose individuals to the risk of infection. Information on knowledge and on the level and intensity of risk behaviour related to HIV/AIDS is essential in identifying populations most at risk for HIV infection and in better understanding the dynamics of the epidemic. It is also critical information in assessing changes over time as a result of prevention efforts. One of the main goals of the 2nd generation HIV surveillance systems is the promotion of regular behavioural surveys in order to monitor trends in behaviours and target interventions.

❑ Knowledge of HIV- related preventive practices

Prevention Indicator 1: Proportion of people citing at least two acceptable ways of protection from HIV infection.

Year	Area	Age Group	Male	Female	All
1994	Urban	15-49	94.1	83.8	

Comments:
Sources: M. Mehret et al. Baseline for the evaluation of an AIDS programme using prevention indicators: a case study in Ethiopia. Bulletin of the WHO. Sexual Risk Behaviour in Urban Populations of the Horn of Africa. Mohamed M. Ali, John G. Cleland, Michel Carael

❑ Reported non-regular sexual partnerships

Prevention Indicator 4: Proportion of sexually active people having at least one sex partner other than a regular partner in the last 12 months.

Year	Area	Age Group	Male	Female
1994	Urban	15-49	18.2	5.2

Comments:
Sources: M. Mehret et al. Baseline for the evaluation of an AIDS programme using prevention indicators: a case study in Ethiopia. Bulletin of the WHO. Sexual Risk Behaviour in Urban Populations of the Horn of Africa. Mohamed M. Ali, John G. Cleland, Michel Carael

❑ Reported condom use in risk sex (gen pop)

Prevention Indicator 5: Proportion of people reporting the use of a condom during the most recent intercourse of risk.

Year	Area	Age Group	Male	Female
1994	Urban	15-49	47.9	47.1

Comments:
Sources: M. Mehret et al. Baseline for the evaluation of an AIDS programme using prevention indicators: a case study in Ethiopia. Bulletin of the WHO. Sexual Risk Behaviour in Urban Populations of the Horn of Africa. Mohamed M. Ali, John G. Cleland, Michel Carael

Knowledge and behaviour

❑ Ever use of condom

Percentage of people who ever used a condom.

Year	Area	Age Group	Male	Female	All

Comments:
Sources:

❑ Median age at first sexual experience

Median age of people at which they first had sexual intercourse.

Year	Area	Age Group	Male	Female	All

Comments:
Sources:

❑ Adolescent pregnancy

Percentage of teenagers 15-19 who are mothers or pregnant with their first child.

Year	Area	Age Group	Rate	N

Comments:
Sources:

❑ Proportion of people ever having had sex with same sex

Year	Area	Age Group	Rate	N

Comments:
Sources:

❑ Reported non-regular sexual partnerships (MSM)

Year	Area	Age Group	Rate	N

Comments:
Sources:

Sources

Data presented in this Epidemiological Fact Sheet come from several different sources, including global, regional and country reports, published documents and articles, posters and presentations at international conferences, and estimates produced by UNAIDS, WHO and other United Nations Agencies. This section contains a list of the more relevant sources used for the preparation of the Fact Sheet. Where available, it also lists selected national Web sites where additional information on HIV/AIDS and STI are presented and regularly updated. However, UNAIDS and WHO do not warrant that the information in these sites is complete and correct and shall not be liable whatsoever for any damages incurred as a result of their use.

Ayehunie, S., D. Zewde, F. Ketema, et al., 1988, Seropositivity to HIV-1 Antibodies in Addis Ababa, Ethiopia, IV International Conference on AIDS, Stockholm, 6/13-14, Poster 5044.

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Mehret, M., L. Khodokevich, D. Zewdie, et al., 1990, HIV-1 Infection and Some Related Risk Factors among Female Sex Workers in Addis Ababa, The Ethiopian Journal of Health Development, vol. 4, no. 2, pp. 171-176.

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Annex: HIV Surveillance data by site

Group	Area		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Pregnant women	Major Urban Areas	Addis Ababa (1)						8.0		10.7	11.2	20.2	20.4	19.5	26.5	16.7		
		Addis Ababa (2)						2.1						20.3	21.4	18.5		
		Addis Ababa (3)													16	20		
		Addis Ababa (4)													9.3	14.1		
Pregnant women	Outside Major Urban Areas	Diredawa								6.9		12.3						
		Metu								2.8		10.7						
		Bahir Dar										13						
		Seya Debir										1.3						
		Shola Gebeya										6.6						
		Mariam Kataro										0						
		Ayuba										0.2						
		Raytu										1						
		Beneste										2						
		Jima										8.6						
		Gambella														12.7		
		Awassa															14.4	
		Attat															0.8	
		Dilla															14.5	
		Hossana															3.6	
		Sodo															9.2	
Group	Area		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Sex workers	Major Urban Areas	Addis Ababa		0.6	2.7	2.7	19.4	24.7	54.2									
Sex workers	Outside Major Urban Areas	Adaitu					32.8	41.8									32.8	
		Arbaminch					8.2										8.2	
		Asmara															2.3	
		Asseb															31.5	
		Assela					12.9										12.9	
		Awassa					15.4										15.4	
		Awasa Arba					23.3										23.3	
		Bahir Dar					35.8	48.2	55	69.4							35.9	
		Dessie					38.1										38.1	
		Diredawa					18	30.5	48.1								18	
		Gewane					30.3										30.3	
		Goba Robi					12.2										12.2	
		Gonder					14.7										14.7	
		Jimma					9.7										9.7	
		Keren															2.5	
		Massawa															1.3	
		Mekele					24.2										24.1	
		Meteka					17.7										17.7	
		Metu					5.3	12.5	36.4									
		Moyale					16.2										16.2	
		Nazareth					19.5	31.1	52.4	65.6							19.8	
		Nekemte					15.3	31.3									15.3	
		Shashemene					19.4										19.4	
Group	Area		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Injecting drug users	Major Urban Areas																	
Injecting drug users	Outside Major Urban Areas																	
Group	Area		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
STI patients	Major Urban Areas	Addis Ababa (1)								34	43							
		Addis Ababa (2)									32							
		Addis Ababa (Males)				8		17.1										
		Addis Ababa (Females)				8.3		36.8										
STI Patients	Outside Major Urban Areas																	
Group	Area		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Blood Donors	National																	
Blood Donors	Major Urban Areas																	
Blood Donors	Outside Major Urban Areas																	